



The Minuteman Repeater Association

The Minuteman

Volume 39, Number 4

March 2010



Membership Meeting

Wednesday, 24 March, 2010 @ 7:00 PM

ARRL Laboratory Manager Ed Hare, W1RFI The ARRL Lab

Framingham MEMA ~ Directions on Page 4

Talk in on Marlborough, 147.27

Ed will be visiting from Newington to tell us about the latest activities at the ARRL lab.

First licensed in 1963, and after 16 years in the electronics industry, Ed came to ARRL HQ in 1986. He started as ARRL's *Product Review* test engineer, moved on to becoming ARRL's RFI guru (notice his call!) and now holds the position of Laboratory Manager. Over the years he has written quite a number of RFI articles, ranging from articles for *QST* and *The ARRL Handbook* to articles that have appeared in professional trade journals. He is also one of the editors and authors of *The ARRL RFI Book* and the author of the ARRL book on RF exposure, *RF Exposure and You*.

Ed is very active in several RFI programs at ARRL, holding membership on the Society of Automotive Engineers EMC/EMR Committee, the ANSI accredited C63 EMC committee as Chair of Subcommittee 5 (Immunity) and as the elected Secretary of the IEEE EMC Society's Standards Development Committee, serving in a leadership role in helping the IEEE oversee the development of EMC standards.

The ARRL New England Convention (Boxboro) is on for August 26-29 at the Holiday Inn in Boxboro. Tickets are on sale on line at the convention website <http://www.boxboro.org>.

Table of Contents

Next Meeting	1, 4	February Board Meeting	4
MMRA Information	2, 7	MRE Upgrade Project	5
Public Service	3	Treasurer's Report	5
President's Corner	3	Events & Fleas	6, 8

MMRA VE Sessions

3rd Saturday of each Month

9 AM at the Marlboro Public Library

Contact: Bill Wade, K1IJ 781-891-9079

Evenings 6 - 10 PM Weekends 8 AM to 10 PM.

Accredited by the ARRL VEC

About the Minuteman Repeater Association

The Minuteman Repeater Association (MMRA) is dedicated to Amateur Radio and public service. The MMRA maintains a large system of repeaters in Eastern Massachusetts.

The MMRA meets (usually) on the 3rd Wednesday of September, November, January, March, and May. Meeting time, locations and talk-in frequency vary. These are announced in the newsletter and on weekly nets. Meetings are open to all interested parties.

The Minuteman newsletter is Emailed one week before each meeting. Members are encouraged to submit articles. Articles may be sent to the editor via email to newsletter@mmra.org. The deadline for articles is the last Friday of the month preceding the meeting.

Each Tuesday evening at 8PM the MMRA links most of the repeaters for an open net. The topic is "Technical Information and Other Stuff". Join us!

Membership in the MMRA is open to all radio amateurs. Annual dues are \$25 per individual or \$35 per family. See our website for details.

Email to the club leadership should be sent to contact@mmra.org. The MMRA maintains a web site at: <http://www.mmra.org/>

An email distribution list for club members named "MMRA" is at: www.yahoogroups.com/

No part of this newsletter can be copied or posted elsewhere without prior approval from the club. Your cooperation in this matter is appreciated.

MMRA QRM Policy

MMRA members and all other operators are strongly encouraged to report repeater activity that does not abide by Part 97 rules or accepted amateur radio practice to the board of directors at contact@mmra.org or via other means.

The most effective (and probably the only effective) way to deal with an individual causing QRM is to NOT engage that individual on the air. Please include the time and date of any incident. Measures are being taken to make audio recordings of repeater activity.

Repeater and Frequency Information

Up-to-date information about both MMRA repeaters and affiliate repeaters can be found at

<http://www.mmra.org/repeaters/index.html>

Location	MHz	PL	Call	Linking	
				To Hub 1	To Hub 2
MMRA Voice Repeaters					
Marlborough	29.680	131.8	W1MRA	PTL	—
Marlborough	53.810	71.9	W1BRI	PTL	—
Boston	145.160	—	W1MRA	D-Star	
Belmont	145.430	67.0	WA1RTT	—	—
Mendon	146.610	146.2	AE1C	FTL	PTL
Quincy	146.670	146.2	W1BRI	PTL	PTL
Burlington	146.715	146.2	N1NVL	PTL	PTL
Weston	146.790	146.2	N1BE	PTL	FTL Hub2 10-4
Brookline	146.820	146.2	K5TEC	FTL	PTL
Marlborough	147.270	146.2	W1MRA	PTL	PTL
Hopkinton	223.940	103.5	K1KWP	FTL	—
Quincy	224.400	103.5	N1KUG	Off the Air	
Weston	224.700	103.5	N1NOM	FTL	PTL
Marlborough	224.880	103.5	W1MRA	PTL	FTL
Weston	442.700	88.5	W1MRA	Network Hub 2 (PTL to Hub 1)	
Burlington	446.775	88.5	W1DYJ	FTL	PTL
Southbor- ough	449.575	88.5	W1BRI	PTL	—
Marlborough	449.925	88.5	W1MRA	Network Hub 1	
Boston	927.0625	D244	K1RJZ	PTL	—
Marlborough	927.700	D244	W1MRA	PTL	—
MMRA “Other” Systems					
Marlborough	144.390	none	W1MRA	APRS Digipeater	
???	145.630	146.2	W1MRA	Fox Box	
Internet	Echolink node 94940				
	IRLP node 4133				

Notes: FTL = Full Time Linked (or default state)
PTL = Part Time Linked (on schedule or demand)
Note — a repeater can be linked to only one Hub at a time.

PL: PL is required to prevent interference. The code **750** will temporarily disable the MMRA PL on the 2M repeaters.

Autopatch: Only the Hub 1 has a telephone line. Link to Hub 1 if necessary, then bring up the autopatch using the 449.925 autopatch codes.

Public Service

Bruce Pigott — KC1US — Public Service Coordinator

With the warmer weather scheduled to begin, more activities that request radio support are being organized. One event that makes extensive use of hams is the **Walk for Hunger**. Around sixty operators are located along the twenty mile route, tying together many volunteers and the walk functions. There are different positions available; some are stationary and others are mobile by foot and vehicle. MMRA members shadow many of the key coordinators. The event is an enjoyable day, with the walkers and volunteers having a good time at this worthwhile cause. Come on out and see more than 40,000 walkers on the route starting in Boston and looping through Newton and back. Easy sign up can be done at <http://www.mmra.org/wfh> or from the MMRA home page.

Another club active in public service is the North Shore Radio Association, which does 15 events a year. Their activities include supporting parades, road races, fund raising scenic

bicycle tours, and rowing races. Check out their list of events and the sign up page at <http://www.nsradio.org/events/index.htm>. The Walk for Hunger ham coordination is a combined effort of the NSRA and the MMRA.

The "Public Service Volunteer Opportunities in the New England Division" list gives many events that are looking for more assistance. You get to see areas that are normally just cute names on a map. There is a link on the MMRA web page under Public Service to see available activities. The current list of events is at the end of this newsletter. When signing up for a new activity, talk with the event coordinator about your skill level. This is one of the many considerations that organizers make when doing operator assignments. Equipment type, physical ability and transportation availability are also taken into consideration. Additional events will be mentioned in future articles.

President's Corner ~ PUBLIC SERVICE!

Bob DeMattia — K1IW

The days are getting longer - and this can mean only one thing: Ham radio public service season is upon us. OK, OK. The days have actually been getting longer for two months now, and the arrival of spring can mean many things. So, perhaps I exaggerate. But in any case, spring does bring about a number of events in the Boston area that use amateur radio to support their efforts. The MMRA is proud to be the primary sponsor of two of these events - the **Boston Marathon** on April 19th and the Boston **Walk for Hunger** on May 2nd.

MMRA members, Steve Schwarm (W3EVE)

and myself, captain two of the teams for the marathon, and Eric Horwitz (KA1NCF) organizes the Walk for Hunger effort. In addition to recruiting the volunteers for these operations, many of the MMRA repeaters will be part of these events. These sort of events provide good practice in operating procedures for emergencies, as well as provide important public service. If you've volunteered in the past, you got my many thanks - and I hope to see you this year. If you've never participated, why not give it a try? All you need is a two meter portable, and extra battery, and a bit of your time. You can volunteer for either of these events by visiting our website

MMRA February Board of Directors Meeting

Bob Evans — N1BE — Clerk

The MMRA Board met telephonically due to inclement weather on the evening of February 10th. Present were WA1NVC, K1KWP, KC1US, W1MPN, N1BE, W1DYJ, W3EVE, N1BE, N1BDA and K1IW.

Plans for the MMRA table at the Marlborough Flea Market were discussed. This included linking for the talk-in and what items would be brought to the flea.

K1KWP provided a treasurer's report which highlighted revenues from donated Analog TV Transmitters. (Thanks to WCVB and WYFF!) Looking at the totals for the last 6 years, donations provided an amount of funds roughly equal to the miscellaneous income and dues that were collected. We have a few more members than two years ago. This is a good sign given the weak economy. The attraction of 900 MHz repeaters is credited with strong membership numbers.

224.400 is being serviced at Bryan's home.

146.67 and 146.61 are having problems: The 61 link transmitter comes up at inappropriate times, interfering with the network. When it is linked, 61 kerchunks the network; it has been changed to not be full-time linked. 67 and its link transmitter lock up and time out the network. Despite some changes to the macros at 67, which seemed to clear up the problem, the problem re-occurred when 224.400 was removed from Quincy. The 67 automatic scheduler has been turned off to avoid this problem.

More research of the de-sense problems at 146.82 is planned for March 6th.

At MRE we are considering antenna improvements for 6M and 10M and some site work to trim many tree branches that interfere with the guy wires.

Given that the March membership meeting has been moved to March 24th, newsletter articles are due to W1DYJ by March 5th.

Directions to the MMRA Meeting

From the West:

1. Take Mass Pike East to Exit 12 (Framingham Route 9).
2. Travel ~ 2 miles to MA State Police Headquarters.
3. MEMA is immediately after the State Police (MEMA has several tall communications towers).
4. Enter through the gate.
5. MEMA is underground. Enter building and follow the ramp to the reception desk.

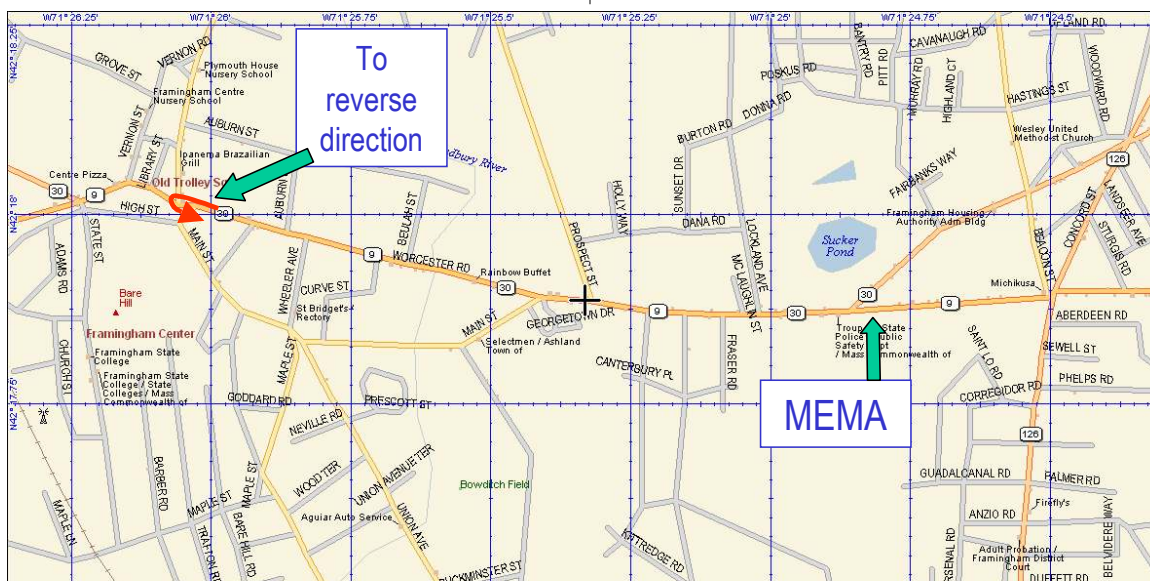
From the East:

1. Take the Mass Pike West to Exit 13 (Route 30).
2. Take Route 30 West ~2 miles going through all lights until the end.

3. Bear right onto Route 9 Westbound.
4. The MEMA communication towers are visible across Route 9 on the eastbound side. Continue approximately 1.2 miles on Route 9 Westbound to intersection with Main Street/Edgell Street.
5. Bear right at this intersection to exit Route 9, then follow the signs to make a U-turn.
6. Follow Route 9 back east for ~1.2 miles to MA State Police Headquarters on the right. Now follow "From the West" # 3

From the North or South:

1. Take Route 128 (95) to Route 9 West (Exit 20B).
2. Follow Route 9 for approximately 8 miles. Now follow "From the East" #4



Treasurer's Update ~ Kevin Paetzold (K1KWP)

In the 2009-2010 membership year a large amount has been spent on repeater system repairs and improvements. Using the last 6 years as a guide more than 3 times the average amount spent directly on the system and more than 2 times the amount spent in any of those other years. These improvements were made possible by the membership dues and generous donations from previous years. However because donations in this membership year, the funds balance has actually increased over what it was when the year started on Sep 1, 2009! This is allowing the club to continue to proceed with projects which have been long needed and/or even more system improvements. For example see the MRE project discussed below in this newsletter.

191 members joined or renewed in the 2008-2009 membership year (ended Aug 31, 2009).

So far 178 members have renewed or joined in this 2009-2010 year (ends Aug 31, 2010). **More than 40 members from 2008-2009 have not yet renewed for 2009-2010** which indicates that there are almost 30 new members. *I do hear several of the members which have not renewed on the repeaters on an almost daily basis.*

Total spending for this year has been about \$9000 and about \$140 in additional known expenses remain (this does not count the \$2000 proposed for the MRE project discussed below).

Maintenance/Upgrade Project at MRE Kevin Paetzold (K1KWP) Treasurer

The club has been undertaking various projects in recent times to perform large maintenance tasks and upgrades at various repeater sites. This includes projects to add lightning protection, fix antennas, and/or upgrade the sites. The board of directors is now proposing a project at the MRE (Marlborough East) site. MRE currently hosts the transmitter (and controller) sides of the 53.81 and 29.68 split site repeaters.

The initial and primary motivation for this project is a need to have some tree trimming performed. The repeater site is in a semi-wooded area and the trees have grown a lot over the years. The trees are now touching the 53.81 antenna. In addition the guy wires for the 53.81 tower are mounted to trees and there is a danger of large branches (or trees) falling on the guys and potentially bringing down the tower. Prudence dictates that we should take some proactive steps to reduce any likelihood of this happening. Of course having trees touching the antenna has performance implications for the repeater. In addition the MRE site has not yet received an upgrade to add lightning protectors.

It does not seem to be a good idea to have hams climbing trees with chainsaws ☺. A tree service with a bucket truck is called for. Having a bucket

truck on site is an opportunity to work on the antenna systems. Besides improving the antennas themselves some of the coax feed lines which have been in place for many years need to be replaced. Some of the link antennas at this site have been problematic and also need to be replaced.

The result is that in addition to the tree service, the club plans to purchase new coax and an antenna for the 6m transmitter and a proper lightning protection system for the entire facility. **The board of directors is asking for a membership vote/ approval at the March meeting for an estimated expenditure of \$2000** for this project. It is quite possible that the eventual overall cost for this project may end up being less. There is also a chance the costs may go up if surprises are encountered. We expect to have a more definitive estimate in time for the actual vote at the meeting. However \$2000 does seem to be a good estimate.

As treasurer I have no concerns or issues supporting this expenditure. MMRA finances are well positioned for this expense thanks to the donation income from selling the Larcen 6M Amplifiers. Making the antenna system improvements at this time leverages the cost of the tree service which is not optional and needs to be done.

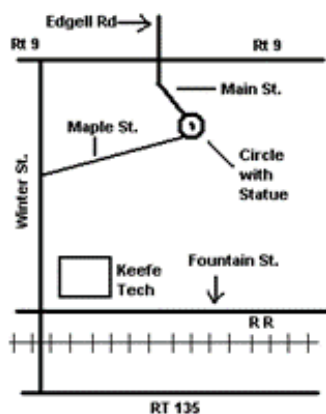
Ham Radio, Computer and Electronics FRAMINGHAM FLEA

Sunday, April 11, 2010

Hours 9AM to 1 PM

Door Prizes - Grand Prize: NEW 2M HT!

Buyers \$5 - Under 12 free with adult!



Directions

KEEFE TECH SCHOOL (keefetech.org)

750 WINTER ST Framingham, MA

Take the FRAMINGHAM CENTRE/STATE COLLEGE exit off Rt.9, then SOUTH on MAIN St.(0.2 mile) to the circle with the statue. Turn right on Maple St.(first exit from circle).Follow Maple St.(0.7 mile) to the end and turn left onto Winter St. School parking lot is 1.2 miles on the left. Keefe is also accessible from Rt 135. Take the bridge over the R R tracks at Winter St. Cross Fountain St. and continue on Winter St. The School Parking lot is on the right (0.1 mile).

TALK-IN 147.15/448.025 PL 88.5

For more info, check our web site: fara.org/flea

HAM LICENSE EXAMS

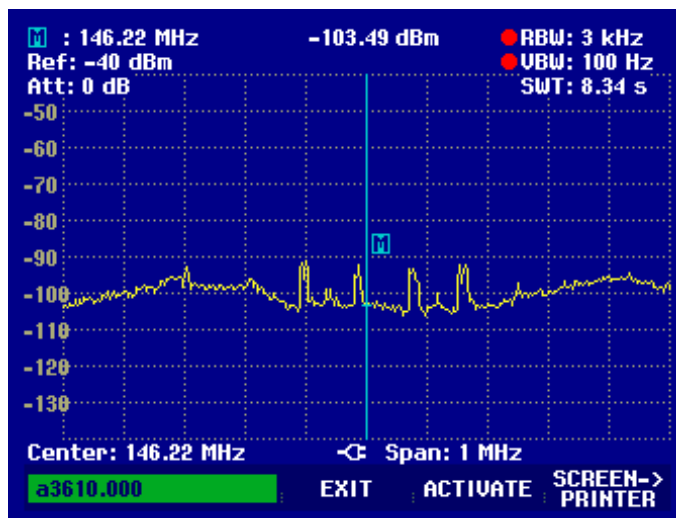
Exam Info call: Jim 508-435-6487

Noise Investigation at 146.82 ~ Brookline

Anyone who uses Brookline 2M — 146.82 — knows that it is not operating up to the level we expect at such a perfect site at the Clay Center Observatory. There is a higher noise level than expected so the receiver is not as sensitive as it should be. This has been an ongoing issue. On Saturday, 6 March, W1BRI, WA1NVC, N1BDA, N1BE, K1JWB, K5TEC, and K1KWP met at the center to investigate the situation and take many measurements. Although no definitive answer has been discovered, some future work has been determined. Hopefully this repeater will soon be working at its potential.



Bryan, W1BRI, taking measurements



The noise spikes in question are at -90 dBm.

Larcan Amps

You all have heard of the donation made by WCVB to the MMRA of their obsolete Channel 5 amps. Here are two pictures from a February 9th work party, where K1IW, K1KWP, N1BE, N1OWA, KC1US, N1BDA and W1DYJ repacked some amps for delivery.



President Bob, K1IW, checking the list of purchasers, with the KW amps in the background.



Some KW amps on the left, and some 1/2 KW amps on the right.

Don't Forget!

**Every Tuesday @ 8 PM
Technical, Informational
and Other Stuff Net**

The MMRA's repeaters are linked Tuesday nights for the TIAOS Net. Join us! This is a good way to keep up with what is happening in the MMRA and ask your ham related questions. **We need another net control!**

If you would like to try your hand at Net Control contact me at W1DYJ@mmra.org – we have a script you can use to start with. This is good practice for a number of ham related operations, from emergency preparedness to contesting.

Current Net Control Operators:

Week 1	WA1JIM	Jimmy Devaire
Week 2	???	OPEN
Week 3	W1DYJ	Larry Banks
Week 4	K1KWP	Kevin Paetzold
Week 5	W1DYJ	Larry Banks

MMRA Leaders

Officers

President	Bob DeMattia	K1IW
Vice President	Steve Telsey	N1BDA
Secretary	John McGovern	W1JMC
Treasurer	Kevin Paetzold	K1KWP
Clerk	Bob Evans	N1BE
Technical Officer	Bryan Cerqua	W1BRI

Board of Directors

Director »2010	Clark Conti	N1NVK
Director »2010	Mike Neilsen	W1MPN
Director »2011	Steve Schwarm	W3EVE
Director »2011	Roger Coulson	WA1NVC

Repeater Trustees, Appointed

Belmont 145.430	Larry Arone	WA1RTT
Boston 927.0625	Rick Zach	K1RJZ
Brookline 146.820	Bob Phinney	K5TEC
Burlington 146.715	Chris Conti	N1NVL
Burlington 446.775	Larry Banks	W1DYJ
Hopkinton 223.940	Kevin Paetzold	K1KWP
Marlboro 53.810, Quincy 146.670, Southboro 449.575	Bryan Cerqua	W1BRI
Marlboro 144.390, 145.160, 147.270, 224.880, 449.925, Weston 442.700, 927.700 — all as W1MRA		
	Bill Northup	N1QPR
Mendon 146.610	Jim Podsiadlo	AE1C
Quincy 224.400	Bill Dunn	N1KUG
Weston 146.790	Bob Evans	N1BE
Weston 224.700	Eddie Mulhern	N1NOM

Appointed, non-Voting

Newsletter Editor	Larry Banks	W1DYJ
Emergency Coord.	Kevin Paetzold	K1KWP
Public Service Coord.	Bruce Pigott	KC1US
VEC Liaison	Bill Wade	K1IJ
Net Manager	Larry Banks	W1DYJ
Web Page Editor	Bob DeMattia	K1IW

Upcoming MMRA Meetings

All meetings start at 7:00 unless otherwise noted.

Date	Location	Feature
Wed, Sep 16	7PM Westborough	Membership Meeting
Wed, Oct 21	Stratus	Board Meeting
Wed, Nov 18	7 PM Milton Library	PAVE PAWS ~ Membership Meeting
Wed, Dec 16	Stratus	Board Meeting
Wed, Jan 20	Sthboro Hse of Pizza	Membership Meeting
* Wed, Feb 10	Chin's Garden, Marlboro	Board Meeting
* Wed, Mar 24	MEMA, Framingham	W1RFI — The ARRL Lab
* Wed, Apr 14	TBD	Board Meeting
Wed, May 19	Clay Center, Brookline	Annual Meeting

* Not the 3rd Wednesday or not the normal time of 7:00PM

Membership Meeting
Wednesday, 24 March, 2010 @ 7:00 PM
ARRL Laboratory Manager Ed Hare, W1RFI
The ARRL Lab
Framingham MEMA ~ Talk in on Marlborough, 147.27

Calendar of Ham Radio Events

Public Service Events

See this web site for contact information
<http://purl.org/hamradio/publicservice/nediv>

Apr 11 Brighton MA	MS Boston Walk
Apr 17 Townsend MA	Squannacook River Canoe Race
Apr 18 Boston MA	BAA 5K & 1 Mile Races
Apr 19 Hopkinton MA	Boston Marathon
Apr 25 Needham MA	Run of the Charles
Apr 25 Groton MA	Groton Road Race
May 2 Boston MA	Project Bread Walk for Hunger
May 22 Natick MA	MS Journey of Hope Walk
May 23 Devens MA	Parker Classic
Jun 26-27 Quincy MA	MS Cape Cod Getaway
Jul 3-5 Fitchburg MA	Longsjo Classic
Jul 17 Concord MA	MS Minuteman Ride
Jul 24 Devens MA	Alzheimer's Memory Ride

New England Area Ham - Electronic Flea Markets

See this web site for contact information
<http://mit.edu/w1gsl/Public/ne-fleas>

20 Mar	Rockport MA	CAARA @PigeonCove
21 Mar	Southington CT	SARA @HS
21 Mar	Henniker NH	CVRC @CommSch
27 Mar	Lewiston ME	AARC ME Conv @Ramada
27 Mar	Windsor CT	VR+C Mus 115 Pierson LN
10 Apr	Gales Ferry CT	RASON Auction
11 Apr	Framingham MA	FARA @KeefeTech
17,18 Apr	Wakefield MA	Photographica @AmericalCtr
17 Apr	S Portland ME	PAWA @AmLegion
17 Apr	Manchester NH	NHAntqRC @Bingo
18 April	Cambridge MA	FLEA at MIT
30 April	1 May Deerfield NH	Nearfest

THE MINUTEMAN REPEATER ASSOCIATION

MMRA
P.O. Box 669
Stow, MA. 01775-0669

Email: contact@mmra.org



WE'RE ON THE WEB
[HTTP://WWW.MMRA.ORG/](http://www.mmra.org/)
